

Agreement Between City of Rapid City and FMG Engineering for Professional Services for Wonderland Drive Area Street and Utilities Reconstruction – Phase 1, Project No. 20-2609/CIP 51070.1

AGREEMENT made _____, 20____, between the City of Rapid City, SD (City) and FMG Engineering, (Engineer), located at 3700 Sturgis Road, Rapid City, SD 57702. City intends to obtain services for Preliminary Design for Wonderland Drive Area Street and Utilities Reconstruction – Phase 1, Project No. 20-2609 / CIP No. 51070.1. The scope of services is as described within this document and as further described in Exhibits A, B and C (attached).

The City and the Engineer agree as follows:

The Engineer shall provide professional engineering services for the City in all phases of the Project and as further defined in Exhibits A, B and C (attached), serve as the City's professional engineering representative for the Project, and give professional engineering consultation and advice to the City while performing its services.

Section 1—Basic Services of Engineer

1.1 General

- 1.1.1 The Engineer shall perform professional services described in this agreement, which include customary engineering services. Engineer intends to serve as the City's professional representative for those services as defined in this agreement and to provide advice and consultation to the City as a professional. Any opinions of probable project cost, approvals, and other decisions provided by Engineer for the City are rendered on the basis of experience and qualifications and represent Engineer's professional judgment.
- 1.1.2 All work shall be performed by or under the direct supervision of a professional Engineer licensed to practice in South Dakota.
- 1.1.3 All documents including Drawings and Specifications provided or furnished by Engineer pursuant to this Agreement are instruments of service in respect of the Project and Engineer shall retain an ownership therein. Reuse of any documents pertaining to this project by the City on extensions of this project or on any other project shall be at the City's risk. The City agrees to defend, indemnify, and hold harmless Engineer from all claims, damages, and expenses including attorney's fees arising out of such reuse of the documents by the City or by others acting through the City.
- 1.1.4 The contract will be based on an hourly rate and reimbursable fee schedule with a maximum not-to-exceed amount.



1.2 Scope of Work

The Engineer shall:

- 1.2.1 Consult with the City, other agencies, groups, consultants, and/or individuals to clarify and define requirements for the Project and review available data.
- 1.2.2 Perform the tasks described in the Scope of Services. (See Exhibit A.)
- 1.2.3 Conduct a location survey of the Project to the extent deemed necessary to provide adequate site information.
- 1.2.4 Prepare a report presenting the results of the study as outlined in the scope of services.

Section 2—Information Provided by City

The City will provide any information in its possession for the project at no cost to the Engineer.

Section 3—Notice to Proceed

The City will issue a written notification to the Engineer to proceed with the work. The Engineer shall not start work prior to receipt of the written notice. The Engineer shall not be paid for any work performed prior to receiving the Notice to Proceed.

Section 4—Mutual Covenants

4.1 General

- 4.1.1 The Engineer shall not sublet or assign any part of the work under this Agreement without written authority from the City.
- 4.1.2 The City and the Engineer each binds itself and partners, successors, executors, administrators, assigns, and legal representatives to the other party to this agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party, regarding all covenants, agreements, and obligations of this agreement.
- 4.1.3 Nothing in this agreement shall give any rights or benefits to anyone other than the City and the Engineer.



- 4.1.4 This agreement constitutes the entire agreement between the City and the Engineer and supersedes all prior written or oral understandings. This agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.
- 4.1.5 The Engineer shall make such revisions in plans which may already have been completed, approved, and accepted by the City, as are necessary to correct Engineer's errors or omissions in the plans, when requested to do so by the City, without extra compensation therefore.
- 4.1.6 If the City requests that previously satisfactorily completed and accepted plans or parts thereof be revised, the Engineer shall make the revisions requested by the City. This work shall be paid for as extra work.
- 4.1.7 If the City changes the location from the one furnished to the Engineer, or changes the basic design requiring a new survey for the portions so changed, the redesign will be paid for as extra work.
- 4.1.8 The City may at any time by written order make changes within the general scope of this Agreement in the work and services to be performed by the Engineer. Any changes which materially increase or reduce the cost of or the time required for the performance of the Agreement shall be deemed a change in the scope of work for which an adjustment shall be made in the Agreement price or of the time for performance, or both, and the Agreement shall be modified in writing accordingly. Additional work necessary due to the extension of project limits shall be paid for as extra work.
- 4.1.9 Extra work, as authorized by the City, will be paid for separately and be in addition to the consideration of this Section.
- 4.1.10 For those projects involving conceptual or process development services, activities often cannot be fully defined during the initial planning. As the project does progress, facts and conditions uncovered may reveal a change in direction that may alter the scope of services. Engineer will promptly inform the City in writing of such situations so that changes in this agreement can be renegotiated.
- 4.1.11 This Agreement may be terminated (a) by the City with or without cause upon seven days' written notice to the Engineer and (b) by the Engineer for cause upon seven days' written notice to the City. If the City terminates the agreement without cause, the Engineer will be paid for all services rendered and all reimbursable expenses incurred prior to the date of termination.



If termination is due to the failure of the Engineer to fulfill its agreement obligations, the City may take over the work and complete it. In such case, the Engineer shall be liable to the City for any additional cost to the extent directly resulting from Engineer's action.

- 4.1.12 The City or its duly authorized representatives may examine any books, documents, papers, and records of the Engineer involving transactions related to this agreement for three years after final payment. All examinations will be performed at reasonable times, with proper notice. Engineer's documentation will be in a format consistent with general accounting procedures.
- 4.1.13 The City shall designate a representative authorized to act on the City's behalf with respect to the Project. The City or such authorized representative shall render decisions in a timely manner pertaining to documents submitted by the Engineer in order to avoid unreasonable delay in the orderly and sequential progress of the Engineer's services.
- 4.1.14 Costs and schedule commitments shall be subject to renegotiation for delays caused by the City's failure to provide specified facilities or information or for delays caused by other parties, excluding sub-contractors and sub-consultants, unpredictable occurrences including without limitation, fires, floods, riots, strikes, unavailability of labor or materials, delays or defaults by suppliers of materials or services, process shutdowns, acts of God, or the public enemy, or acts of regulations of any governmental agency or any other conditions or circumstances beyond the control of the City or Engineer. Temporary delays of services caused by any of the above which results in additional costs beyond those outlined may require renegotiation of this agreement.
- 4.1.15 The City will give prompt written notice to the Engineer if the City becomes aware of any fault or defect in the Project or nonconformance with the Project Documents.
- 4.1.16 Unless otherwise provided in this Agreement, the Engineer and the Engineer's consultants shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to hazardous materials in any form at the project site, including but not limited to asbestos products, polychlorinated biphenyl (PCB), or other toxic substances.
- 4.1.17 In the event asbestos or toxic materials are encountered at the jobsite, or should it become known in any way that such materials



may be present at the jobsite or any adjacent areas that may affect the performance of Engineer's services, Engineer may, at their option and without liability for consequential or any other damages, suspend performance of services on the project until the City retains appropriate specialist CONSULTANT(S) or contractor(s) to identify, abate, and/or remove the asbestos or hazardous or toxic materials.

- 4.1.18 This agreement, unless explicitly indicated in writing, shall not be construed as giving Engineer the responsibility or authority to direct or supervise construction means, methods, techniques, sequences, or procedures of construction selected by any contractors or subcontractors or the safety precautions and programs incident to the work of any contractors or subcontractors.
- 4.1.19 Neither the City nor the Engineer, nor its Consultants, shall hold the other liable for any claim based upon, arising out of, or in any way involving the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids, or gases, waste materials, or other irritants, contaminants, or pollutants.
- 4.1.20 Neither the City nor the Engineer, nor its Consultants, shall hold the other liable for any claim based upon, arising out of, or any way involving the specification or recommendation of asbestos, in any form, or any claims based upon use of a product containing asbestos.
- 4.1.21 Engineer hereby represents and warrants that it does not fail or refuse to collect or remit South Dakota or City sales or use tax for transactions which are taxable under the laws of the State of South Dakota.

4.2 City of Rapid City NonDiscrimination Policy Statement

In compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination act of 1975, the Americans with Disabilities Act of 1990, and other nondiscrimination authorities it is the policy of the City of Rapid City, 300 Sixth Street, Rapid City, SD 57701-5035, to provide benefits, services, and employment to all persons without regard to race, color, national origin, sex, disabilities/handicaps, age, or income status. No distinction is made among any persons in eligibility for the reception of benefits and services provided by or through the auspices of the City of Rapid City.

Engineer will permit access to any and all records pertaining to hiring and employment and to other pertinent data and records for the purpose of enabling the Commission, its agencies or representatives, to ascertain compliance with the above provisions.

This section shall be binding on all subcontractors or suppliers.



Section 5—Payments to the Engineer

5.1 Schedule of Pay Rates

The City will pay the Engineer for services rendered or authorized extra work according to the Engineer's hourly and reimbursable rate schedule described in Exhibit C.

5.2 Fee

The maximum amount of the fee for the services as detailed in Section 1.2 shall not exceed **\$208,327.00** unless the scope of the project is changed as outlined in Section 4. If expenses exceed the maximum amount, the Engineer shall complete the design as agreed upon here without any additional compensation. Sub task dollar amounts may be reallocated to other tasks as long as the total fee is not exceeded. Prime consultant may not mark up sub-consultant or sub-contractor services.

5.3 Progress Payments

Monthly progress payments shall be processed by the City upon receipt of the claim as computed by the Engineer based on work completed during the month per the hourly rates and allowable reimbursable as established in Section 5.1 and approved by the City.

Net payment to the Engineer shall be due within forty-five (45) days of receipt by the City.

Section 6—Completion of Services

The Engineer shall complete services on or before December 31, 2022, based on award date of February 1, 2021.

Section 7—Insurance Requirements

7.1 Insurance Required

The Engineer shall secure the insurance specified below. The insurance shall be issued by insurance company(s) acceptable to the City and may be in a policy or policies of insurance, primary or excess. Certificates of all required insurance including any policy endorsements shall be provided to the City prior to or upon the execution of this Agreement.



7.2 Cancellation

The Engineer will provide the City with at least 30 days' written notice of an insurer's intent to cancel or not renew any of the insurance coverage. The Contractor agrees to hold the City harmless from any liability, including additional premium due because of the Contractor's failure to maintain the coverage limits required.

7.3 City Acceptance of Proof

The City's approval or acceptance of certificates of insurance does not constitute City assumption of responsibility for the validity of any insurance policies nor does the City represent that the coverages and limits described in this agreement are adequate to protect the Engineer, its consultants or subcontractors interests, and assumes no liability therefore. The Engineer will hold the City harmless from any liability, including additional premium due, because of the Engineer's failure to maintain the coverage limits required.

7.4 Specific Requirements

7.4.1 Workers' compensation insurance with statutory limits required by South Dakota law. Coverage B-Employer's Liability coverage of not less than \$500,000 each accident, \$500,000 disease-policy limit, and \$500,000 disease-each employee.

7.4.2 Commercial general liability insurance providing contractual, personal injury, bodily injury and property damage liability coverage with limits of not less than \$1,000,000 per occurrence, \$2,000,000 general aggregate, and \$2,000,000 aggregate products and completed operations. If the occurrence form is not available, claims-made coverage may be provided. Claims-made coverage shall continue through the term of this Agreement, and Engineer shall purchase at its sole expense either 1) an Extended Reporting Endorsement (also known as Tail Coverage); or 2) Prior Dates Coverage from new insurer with a retroactive date back to the date of, or prior to, the inception of this Agreement; or 3) shall demonstrate through Certificates of Insurance that Engineer has maintained continuous coverage with the same or original insurer. Coverage provided under items 1), 2), or 3) will continue for at least a period of three years after completion of the terms of this Agreement. The policy shall name the City and its representatives as an additional insured.

7.4.3 Automobile liability insurance covering all owned, nonowned, and hired automobiles, trucks, and trailers. The coverage shall be at least as broad as that found in the standard comprehensive automobile liability policy with limits of not less than \$1,000,000 combined single



limit each occurrence. The required limit may include excess liability (umbrella) coverage. The policy shall name the City and its representatives as an additional insured.

- 7.4.4 Professional liability insurance providing coverage for claims arising from the negligent acts, errors or omissions of the Engineer or its consultants, of not less than \$1,000,000 each occurrence and not less than \$1,000,000 annual aggregate. Coverage shall be maintained for at least three years after final completion of the services. If this policy provides for claims-made coverage, the claims-made coverage shall continue through the term of this Agreement, and Engineer shall purchase at its sole expense either 1) an Extended Reporting Endorsement (also known as Tail Coverage); or 2) Prior Dates Coverage from new insurer with a retroactive date back to the date of, or prior to, the inception of this Agreement; or 3) shall demonstrate through Certificates of Insurance that Engineer has maintained continuous coverage with the same or original insurer. Coverage provided under items 1), 2), or 3) will continue for at least a period of three years after completion of the terms of this Agreement.

Section 8—Hold Harmless

The Engineer hereby agrees to hold the City harmless from any and all claims or liability including attorneys' fees arising out of the professional services furnished under this Agreement, and for bodily injury or property damage arising out of services furnished under this Agreement, providing that such claims or liability are the result of a negligent act, error or omission of the Engineer and/or its employees/agents arising out of the professional services described in the Agreement.

Section 9—Independent Business

The parties agree that the Engineer operates an independent business and is contracting to do work according to his own methods, without being subject to the control of the City, except as to the product or the result of the work. The relationship between the City and the Engineer shall be that as between an independent contractor and the City and not as an employer-employee relationship. The payment to the Engineer is inclusive of any use, excise, income or any other tax arising out of this agreement.

Section 10-Indemnification

If this project involves construction and Engineer does not provide consulting services during construction including, but not limited to, onsite monitoring, site visits, site observation, shop drawing review and/or design clarifications, City agrees to indemnify and hold harmless Engineer from any liability arising from the construction activities



undertaken for this project, except to the extent such liability is caused by Engineer's negligence.

Section 11-Controlling Law and Venue

This Agreement shall be subject to, interpreted and enforced according to the laws of the State of South Dakota, without regard to any conflicts of law provisions. Parties agree to submit to the exclusive venue and jurisdiction of the State of South Dakota, 7th Judicial Circuit, Pennington County.

Section 12-Severability

Any unenforceable provision herein shall be amended to the extent necessary to make it enforceable; if not possible, it shall be deleted and all other provisions shall remain in full force and effect.

Section 13—Funds Appropriation

If funds are not budgeted or appropriated for any fiscal year for services provided by the terms of this agreement, this agreement shall impose no obligation on the City for payment. This agreement is null and void except as to annual payments herein agreed upon for which funds have been budgeted or appropriated, and no right of action or damage shall accrue to the benefit of the Engineer, its successors or assignees, for any further payments. For future phases of this or any project, project components not identified within this contract shall not constitute an obligation by the City until funding for that component has been appropriated.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

City of Rapid City:

Engineer:

Steve Allender, MAYOR

Richard Sudmeier, PE
FMG Engineering

DATE: _____

DATE: _____



ATTEST:

Pauline, Sumption, FINANCE DIRECTOR

Reviewed By:

Sara Odden

Sara Odden, PE
Project Manager

DATE: 1/13/2021

CITY'S DESIGNATED PROJECT
REPRESENTATIVE

NAME Sara Odden
PHONE 605.394.4154
EMAIL sara.odden@rcgov.org

ENGINEERING FIRM'S DESIGNATED
PROJECT REPRESENTATIVE

NAME Richard Sudmeier
PHONE 605.342.4105
EMAIL RSudmeier@fmgengineering.com



SCOPE OF SERVICES

FOR WONDERLAND DRIVE AREA STREET AND UTILITIES RECONSTRUCTION PHASE 1 PROJECT NO. 20-2609 / CIP No. 51070.1

The City of Rapid City hereafter referred to as the “Owner” have determined the need to procure professional services for the design and bidding for Wonderland Drive Area Street and Utilities Reconstruction – Phase 1.

FMG Engineering was selected through the City of Rapid City’s Consultant selection process to provide engineering services for Tasks 1 through 5 for the above referenced project. The Scope of Work in this contract is for Task 1 - Preliminary Design Services. Upon completion of Task 1, Task 2 – Final Design Services and Task 3 – Bidding Services will be negotiated. If requested by the owner, Task 4 – Basic Construction Services and/or Task 5 – Expanded Construction Services will be negotiated at a later date.

The work to be completed under this contract shall be in general conformance with the RFP. A list of individual tasks and subtasks to complete the work is shown below. The list of tasks will not be necessarily limited to those shown. Tasks will be added or deleted as needed to complete the project.

PROJECT DESCRIPTION

This phase of the Wonderland Drive Area Reconstruction includes Wonderland Drive between Iris Drive and Pine View Drive, including Woodle Drive, Riva Ridge Road and Ponderosa Court.

The Owner is interested in creative design components for this reconstruction project that may not be included in the current City design criteria such as unique ways to address water quality, traffic calming, and pedestrian access.

PROJECT DESIGN AND EVALUATION COMPONENTS

1) STREETS

- Roadways will be designed as rural pavement sections without curb and gutter. Some areas may require curb and gutter for grading purposes.
 - Wonderland Drive between Iris Drive and Cliff Drive is considered a Collector street per the Infrastructure Design Criteria Manual (IDCM). The consultant will evaluate various type of roadway reconstruction for this segment of Wonderland Drive, including but not limited to, utility patch and overlay, utility patch and overlay with improvements made alongside the roadway to control erosion and drainage, and full roadway reconstruction with minimum pavement width of 20 feet plus a minimum of 2 foot shoulders.
 - Wonderland Drive between Cliff Drive and Pine View Drive is considered a local street and is anticipated to be reconstructed with a minimum pavement width of 20 feet. Shoulders shall have a minimum width of 2 feet.
 - Woodle Drive is an existing private street. A utility patch will be placed, followed by a full street width asphalt overlay.
 - Riva Ridge Road is a dead-end street that is classified as a lane/place and the street will be fully reconstructed. The Consultant shall evaluate creative design alternatives for recommendations to bring this cul-de-sac into conformance with



the current design criteria.

- Ponderosa Court is a lane/place cul-de-sac that will be fully reconstructed. The street currently has curb and gutter which will be replaced in-kind. The consultant will verify cul-de-sac design criteria in the IDCM, and will provide recommendations to bring the cul-de-sac into compliance if the current configuration does not meet criteria.

Where feasible, roadway horizontal and vertical alignments shall meet the minimums from the IDCM. Where this is not feasible due to terrain and other controlling factors, the Consultant will provide detailed descriptions concerning the infeasibility and request design exceptions for each location which does not meet criteria minimums.

Evaluate adding sidewalks/pathways to the roadway section. The project area questionnaire should include a question asking if the residents would like sidewalks/pathways installed with the project. The language of the questionnaire shall inform the property owner that if sidewalks/pathways were constructed as a part of this project the cost of this may be assessed to the property.

A separate questionnaire will be sent to properties along Wonderland Drive between Pine View Drive and Rosemary Lane asking if residents would like sidewalk/pathways installed along the corridor.

The Consultant will evaluate traffic speeds and counts for determination what, if any, traffic control measures should be implemented.

2) PAVEMENT

- Provide pavement thickness recommendations along with roadway and embankment cut and fill recommendations based on data provided through a Geotechnical Evaluation of the project area. Design life of the pavement shall be 20 years. The proposed surfacing will be asphalt.

3) DRAINAGE

- Evaluate storm water hydrology and hydraulics. Analyze existing and proposed crossings to ensure design criteria is met. Some areas within the project limits have structures that allow for storm water ponding at the upstream side of roadway crossings; analysis for these areas should include impacts to adjacent property.
- Evaluate and provide recommendations for Ponds 302 and 303 from the Wonderland Drainage Basin Design Plan. This evaluation will include what affects the existing upstream ponding areas have on inflows into Pond 303 and look to eliminate Pond 303 and using only Pond 302 for storm water detention.
- Provide documentation proposed drainage does not adversely impact properties that do not have existing or proposed drainage easements.
- Evaluate Water Quality improvements are required is impervious area is increased. Evaluate where water quality improvements used within the proposed project area.
- Evaluate existing drainage easements. Ensure the existing drainage easements are adequate for the storm water conditions. Propose additional drainage easements as necessary.
- Evaluate eliminating existing drainage swale located between the 1st and 2nd lots east of Wonderland Drive along the north side of Ponderosa Court.

4) SANITARY SEWER

- Evaluate and design sanitary sewer system with Wonderland Drive from Cliff Drive to



Pine View Drive, including Ponderosa Court. The Consultant shall also evaluate alternate route for the sanitary sewer including connecting to an existing sanitary sewer stub under Park Drive. The evaluation and design shall provide gravity sanitary sewer service where feasible. Some properties within the gravity sewer service area may be required to pump to the main depending on existing septic and drain field elevations.

- The consultant shall verify existing on-site sanitary sewer system locations as a part of the evaluation process. The questionnaire sent to property owners will include language asking if the property owner knows where their on-site sanitary sewer system is located. The consultant shall meet with the owner to verify the on-site sewer system location and survey its location for use during analysis and design.
- Sanitary Service lines will be extended to the property lines.

5) WATER

- Evaluate and design water main within the project limits.
- Evaluate the alternative routes the Southwest Pressure Zone water main from Park Drive to the project limits. This evaluation will include an area along Park Drive that will be required to be converted to the Southwest Pressure Zone.
 - The Consultant shall evaluate the existing water main pipes within the pressure zone conversion area to verify the pressure zone switch can occur, evaluate and propose infrastructure as necessary to facilitate the pressure zone switch, and consider the number of properties that will be impacted as well as facilitate the necessary protocol for the pressure zone switch. As part of this evaluation, the owner will verify the sizing of the existing water main to verify if upsizing will be necessary in the future. If pipe replacement is required, the owner will determine if a large water main is required to accommodate anticipated demands.
 - The Consultant shall design, coordinate, and implement the pressure zone conversion, including the property owner coordination, as necessary to prepare for the pressure zone conversion.
- Water Main Type
 - Consultant shall provide a supported recommendation (with justification including analysis and calculations necessary) whether restrained or unrestrained joint pipe should be used.
 - Consultant shall provide supported recommendations on DR sizing of the water mains, with justification, including calculations necessary.
- Fire Flow
 - The Owner shall provide the Consultant available fire flows in the project area in the form of a data table. Consultant shall coordinate with the City of Rapid City Fire Department to obtain the required maximum fire flows in the area per the pressure zone. The Consultant shall summarize this information and use this information to support an exception if existing infrastructure does not make it possible to achieve required fire flows for the project area.
- Water Main Extensions
 - 8" PVC Water Main will be extended between Wonderland Court and Cliff Drive
 - This water main shall provide service from the South Canyon Arrowhead pressure zone.
 - 12" PVC Water Main will be extended from Cliff Drive to Ponderosa Court, and



then extend to Park Drive through a route determined by the Consultant. This water main shall provide service to the Southwest pressure zone. Pressure zone conversion locations will also be evaluated.

- 8" PVC Water Mains will be extended in Woodle Drive, Rive Ridge Road, and Ponderosa Court.
- Water service lines will be extended to the property lines.
- Water main extension into Carmen Court shall be evaluated for inclusion within the project. The elevation of the properties within Carmen Court likely warrant connection to the Southwest Pressure Zone.
- The Consultant will evaluate the feasibility of the extending the Parkridge PRV pressure zone into a portion of this project in lieu of providing service from the Southwest Pressure zone.

6) CONSTRUCTION PHASING

The Consultant shall determine conceptual project sequencing including but not limited to items related to water main construction and operation, sanitary sewer main connectivity, and grading.

Preliminary traffic control requirements will be evaluated.

7) RIGHT-OF-WAY REQUIREMENTS

- Majority of work shall be limited to existing ROW, however easements and ROW may be necessary. The Consultant shall look at limiting the amount of easement and ROW acquisition necessary and only required where appropriate for infrastructure/grading needs. The Consultant will acquire easements and ROW on behalf of the Owner for this project. The Owner will provide the consultant the necessary easement and right-of-way agreements.

8) GEOTECHNICAL EVALUATION

- Geotechnical Evaluation shall include adequate borings to determine the underlying strata. Cut and fill slope recommendations. Insitu soil evaluation shall include a determination of suitability for embankment construction. Project plans shall include quantifying rock excavation if necessary and procedures for evaluating in place soil suitability for embankment construction and recommendations and qualifications for imported embankment.

The preliminary design shall include plan drawings up to a 35% design phase and design report quantifying findings and providing recommendations for the final design of the projects.

TASK 1 - PRELIMINARY DESIGN SERVICES:

This task consists of all services necessary to take the project from beginning through the Preliminary Design submittal stage and may include the following itemized services.

- 1.1 Progress Meeting(s): The consultant shall meet with Owner's staff to detail progress concerning design alternatives and other items that may be discussed. The consultant shall prepare an agenda, take minutes, and distribute minutes; at most 4 meetings are anticipated.
- 1.2 Review background information and any other resources as necessary.



- 1.3 Perform site surveys sufficient for design plan preparation. The route and topography survey shall be tied to at least two City of Rapid City Monument Control system monuments utilizing NAD 83 (2011) State Plane South Zone horizontal coordinates and the NAVD 88 vertical datum. The horizontal and vertical coordinates shall be established from the Rapid City Primary Control Network.

Topographic survey will be a combination of Lidar Data provided by SkySkopes, Inc. and field survey. Lidar data will include topographic surface, feature extractions that includes pavement, curb and gutter, and edge of buildings. Field survey will include utilities, culverts, landscaping items, tree diameters, fences, etc.

- 1.4 Determine locations of existing water services:
- A. Rapid City Utility Maintenance will provide locating services for all water mains.
 - B. Rapid City Utility Billing and Service will operate curb stops to verify individual water connections. The City will be responsible for repairing broken or inoperable curb stops.
 - C. Consultant will coordinate schedule with Rapid City Billing and Service and be responsible for notifying property owners of temporary water shutoffs and requirements for entry into structures to verify shutoffs.
 - D. Water service to structures will be verified by the Consultant following closing of the curb stop.
 - E. Most of the water services may be not be traceable due to poly services lines. However, if the City has records of water service replacements, the City will provide this information to the Consultant. The consultant shall attempt to contact all water system managers to acquire records of local water systems. At a minimum the Consultant shall locate all water service curb stops.
- 1.5 Determine locations of existing onsite wastewater treatment systems.
- A. The Consultant shall verify the location of the on-site wastewater treatment systems by coordinating and meeting with property owners.
 - B. The Consultant may retain the services of a third party to provide video inspection of the onsite wastewater treatment system to aid of verifying the location of wastewater pipe from structures.
- 1.6 Develop and distribute a survey questionnaire to property owners adjacent to the proposed project before topographic survey begins. The questionnaire will be developed to obtain information on location of on-site wastewater treatment systems, landscaping or irrigation systems, erosion and storm water drainage problems, history of utility or other infrastructure problems at the property, special needs such as access considerations during construction, and considerations for pedestrian access (sidewalks/pathways).

Questionnaires will be returned to and evaluated by the Consultant, the follow up with appropriate individual contact from the properties prior to completion of preliminary plans to review project considerations that may be addressed or mitigated by the project work. Questionnaire responses shall be summarized and included with the Preliminary Design Report.

An additional questionnaire will be distributed to property owners and residents along Wonderland Drive south of the project. This questionnaire will only inquire if a pedestrian pathway along Wonderland Drive is desired.

- 1.7 Consultant shall meet with individual property owners to a). verify location of on-site wastewater treatment system and b) upon completion of preliminary design meet with individual owners to



discuss impacts the project may have to the individual property, such as grading, utility services, temporary easements, etc. Concerns brought by the property owners will be addressed with the City and if acceptable or feasible incorporated in the final design.

- 1.8 Private Utilities Base Plan Verification: The consultant shall send base plans to the private utilities requesting verification that their utilities are shown correctly per their records. After submitting plans to the utility companies, the consultant shall verify that the utilities are shown correctly and to make plan revisions as needed. Individual meetings with representatives from the private water systems within the project will also be required.

- 1.9 Perform Geotechnical Evaluation.

To evaluate the existing soil and rock conditions along the project alignment, the consultant will drill a total of 15-20 boreholes. Field testing will be performed, and samples will be extracted for further laboratory analysis. Select soil samples will be tested in our laboratory to determine their general classification, physical properties, and engineering characteristics.

There is the possibility of rock located beneath the subsurface. In locations where roadway and utility construction will likely encounter rock, the boreholes will be spaced to evaluate approximate extents and nature of the rock mass.

Upon completion of the field and laboratory testing and our analysis, a report will be prepared that transmits the boring logs, field data, and laboratory results, provides a limited geologic analysis of the area, and provides our recommendations for roadway subgrade preparation, utility design and installation, and pavement section design. In general, our recommendations will also include excavation conditions, groundwater mitigation, suitability of backfill materials and any other recommendations we consider applicable to the proposed construction and the site conditions encountered.

- 1.10 Preliminary Design Submittal

The Preliminary Design Submittal shall generally consist of the following documents:

A. Preliminary Design Report

Prepare a Preliminary Design Report: The consultant shall establish and indicate project specific design criteria and standards within the Preliminary Design Report. The consultant shall submit all design assumptions for pipe sections, and storm sewer locations, pavement sections, etc. The Consultant shall include design life, design criteria, and reference of design resources. The Consultant shall use the City Infrastructure Design Criteria Manual to establish design criteria and standards.

The Preliminary Design Report shall include evaluations and recommendations based on items outlined under the heading "Project Design and Evaluation Components" above.

The project's geotechnical report shall be included within the Preliminary Project Design Report and include soil classifications, N values, water levels, proctors, CBR's, pavement design, and testing recommendations. The Consultant shall elaborate on other project components as necessary.

A probable opinion of construction costs for the project shall be included. The costs shall be itemized based on the City's standard bid items. The cost will also include appropriate contingency item allowance including repairs to private water systems that will likely be encountered during construction.



The consultant shall establish and indicate project specific design criteria and standards within the Preliminary Design Report. The City's Infrastructure Design Criteria Manual shall be used to establish design criteria and standards. The Preliminary Design Report shall provide review of compliance with City's Standard Specifications for construction of the project.

Identify the existing right-of-way (ROW) location and any ROW or easements necessary for the Project. Include size and extent of such ROW and easements and contact information of property owners.

Submit one (1) copy and a PDF version of the Preliminary Design Report and preliminary plans and specifications to City of Rapid City's project manager for review and comment.

B. Preliminary Drawings

Provide two (2) copies and a PDF version of the Preliminary drawings (11"x17" size). The Preliminary drawings shall contain the following sheets:

- Cover Sheet – Note the index of Sheets indicating the anticipated drawing sheets shall be provided.
- Survey Control Sheet – The Survey Control sheet shall include control points with Northing, Easting, Elevation, and Description with Station and Offset to the closest alignment. Horizontal alignments including beginning and end stations, and deflections and curve data. Combined ground to grid scale factor and Basis of Bearings.
- Typical Sections
- Legend
- Property Layout and Land Ownership
- Plan and Profile Sheets - Show existing and proposed utility mains, driveway locations, and proposed surfacing and drainage items, right-of-way takings and temporary easements. The utilities should be shown in profile as well. Design Criteria elements like profile grades, "K" values, vertical and horizontal curve data should be included.
- Cross Sections with existing and proposed city utilities.
- Special Details - Preliminary layouts for special/critical elements for example storm water quality features, special drainage structures, etc.
- Plan sheets shall be prepared utilizing the latest City of Rapid City Drafting Standards. Use current City-provided drawing templates.
- Plans should include separate bid schedules for individual projects.

1.11 Attend submittal review meeting with the City's staff, if necessary.

1.12 Reimbursables including, Printing, Supplies, Mileage, Expendables for Preliminary Design.



SCHEDULE:

Council Authorization	February 1, 2021
Notice to Proceed	February 5, 2021
Task 1 –	
Questionnaires Mailed	February 19, 2021
Topographic and Property Survey	April 16, 2021
Geotechnical Investigation	June 25, 2021
Property Owner Meeting Completed	June 25, 2021
Preliminary Design Submittal	July 30, 2021
Final Design Contract NTP (approximate)	October 8, 2021



FMG ENGINEERING
TASK SCHEDULE - ESTIMATED FEES
WONDERLAND DRIVE ARES STREET AND UTILITIES RECONSTRUCTION
PROJECT No. 20-2609 / CIP No. 51070.1

EXHIBIT B

	TASK 1 - PRELIMINARY DESIGN SERVICES	FEES
1.1	Progress Meetings (approximately 3)	\$ 1,560.00
1.2	Collect and Review Background Information	\$ 2,240.00
1.4	Determine Locations of Existing Water Services	\$ 2,420.00
1.5	Determine Locations of Existing Onsite Sanitary Sewer Systems	\$ 5,240.00
1.6	Develop and Distribute Survey Questionnaire to Property Owners	\$ 1,300.00
1.7	Meet with Individual Property Owners (2 meetings, 66 Owners)	\$ 22,705.00
1.8	Private Utilities Base Plan Verification	\$ 1,520.00
1.9	Perform Geotechnical Investigation	\$ 13,320.00
1.10A	Preliminary Design Report	\$ 62,860.00
1.10B	Conceptual Design Drawings	\$ 34,040.00
1.11	Attend Submittal Review Meeting with City Staff	\$ 1,420.00
1.12	Reimbursables (Mileage)	\$ 1,008.00
	TOTAL FOR TASK 1 - PRELIMINARY DESIGN SERVICES	\$ 208,327.00

NOTES: Although dollar values have been provided for each task, FMG retains the right to
 Reallocate monies to other tasks subject to the maximum limiting fee shown above or as discussed in Exhibit A.

EXHIBIT C
FMG ENGINEERING
WONDERLAND DRIVE AREA STREET AND UTILITIES RECONSTRUCTION
PHASE 1
PROJECT NO. 20-2609 / CIP NO. 51070.1
RATE SCHEDULE

<u>PERSONNEL</u>	<u>RATE</u>
Principal Engineer II	\$186.00/hr
Principal Engineer I	\$160.00/hr
Senior Engineer	\$145.00/hr
Engineer III – PE	\$125.00/hr
Engineer II – PE	\$115.00/hr
Engineer I – PE	\$105.00/hr
Geospatial Analyst	\$105.00/hr
Graduate Engineer II – EIT	\$100.00/hr
Graduate Engineer I – EIT	\$90.00/hr
CADD Technician II	\$95.00/hr
CADD Technician I	\$85.00/hr
Geologist - PG	\$90.00/hr
Environmental Scientist	\$85.00/hr
Land Surveyor - RLS	\$105.00/hr
Land Surveyor – LSIT	\$92.00/hr
Survey Technician II	\$87.00/hr
Survey Technician I	\$77.00/hr
Engineering Technician III	\$82.00/hr
Engineering Technician II	\$77.00/hr
Engineering Technician I	\$74.00/hr
Administrative Assistant	\$75.00/hr
 <u>VEHICLES & EXPENSES</u>	
Mobilization (Support Vehicle)	\$0.70/mile
Mobilization (Drill Rig)	\$2.00/mile
ATV	\$100/day
Travel Costs - air, lodging, transport, meals, etc.	cost